DOCUMENT RESUME

ED 239 671 JC 840 044

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TITLE New Technology and the Human Response: The Issues Facing Vocational Education in the 1980's.
PUB DATE Jan 84
NOTE 9p.
PUB TYPE Viewpoints (120)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *College Role; Community Colleges; Cooperative Programs; *Educational Planning; *Education Work Relationship; Job Training; *Labor Force Development; School Business Relationship; Two Year Colleges; *Vocational Education; Vocational Education Teachers

ABSTRACT

Five issues facing vocational education are becoming sufficiently visible to suggest an agenda for community college action. First, the Job Training and Partnership Act, which seeks to address the continued dislocation of the American economy and to rectify problems of structural unemployment, will require greater cooperation and coordination among education, business, industry, labor, and government to meet local training needs. Second, since the time lag between technological innovation and commercial application of new techniques and processes is down to 2 or 3 years, new linkages with business, industry, and government must be established by community colleges to update equipment in vocational laboratories and shops. Third, vocational education must be able to provide remedial, entry-level, upgrading, and structural retraining opportunities simultaneously in light of the prospect of technological retraining facing all Americans during their work lives. Fourth, vocational faculty will need retraining to respond to changing technologies through periodic returns to business or industry. Finally, a technologically sophisticated economy will require employees with the basic skills necessary for mastering the new technologies. To respond to these challenges, community colleges must develop delivery systems founded on technological literacy and independent learning; a competent vocational faculty to prepare the social environment for technology transfer; and greater cooperation and coordination. (HB)

NEW TECHNOLOGY AND THE HUMAN RESPONSE

The Issues Facing Vocational Education in the 1980s

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An earlier version of this paper appeared in Change, The Quarterly Newsletter of the MD Vocational Association (V. 1 #1, Winter 1983, pp. 12-18)

Introduction

In their bestseller, In Search of Excellence: Lessons from America's Best-Run Companies, Peters and Waterman report that the Belgian surrealist Magritte painted a series of pipes and entitled the painting Ceci n'est pas une pipe (This is not a pipe). They suggest "The picture of the thing is not the thing."[1] Similarly, vocational education is more than the sum of its programs. It is a philosophy, a system of values, and a way of ordering reality. Any attempt to characterize the current status of vocational education and enumerate the issues facing it is likely to result in rearranging the pieces of a very familiar puzzle. The 1980s, however, are emerging as years filled with challenge and change. Vocational educators, therefore, must be prepared to accept that the traditional picture of their craft may not represent its current reality. Further, we must become facile at rearranging the elements of vocational education so that our reality is relevant to a rapidly changing, technology-based, service economy. The challenge is not unlike that described by Lewis Carroll in Through the Looking Glass. The Red Queen says "...it takes all the running you can do to keep in the same place. If you want to get somewhere else, you must run at least twice as fast...!"[2] Accepting the challenge, I will attempt to identify the most pressing issues facing vocational education, delimit their parameters, and suggest a strategy for synthesizing them into an agenda for action in the 1980s. All response to change in vocational education must be characterized by precision, comprehensiveness, and speed. Is it possible that the Red Queen was a prophetess?

Vocational Education: An Issues Survey

The September 1983 issue of VocEd, the journal of the American Vocational Association (AVA), examines vocational education in the community college.

George Mehallis, AVA's vice president for technical education, and his wife, Mantha, director of institutional research at Broward Community College, Florida, wrote an article entitled "Vocational Education in the Community College: Defining Our Mission." In it they present three principle concerns facing vocational education.[3] In the October 1983 issue of the Technological Horizons in Education Journal, Raymond J. Donovan, U.S. Secretary of Labor, wrote an article called "The Importance of Retraining America's Work Force." He advances four challenges facing American education if technological change is to be managed.[4] These articles suggest that an issues survey would clarify the nature of the challenge facing vocational education.

Since my institution is a small, suburban community college, other participants in the survey represent a large, urban community college, and the American Association of Community and Junior Colleges (AACJC). Dr. Dennis Bartow, Dean of Vocational Education at Prince George's Community College, Maryland, and Ms. Carol Eliason, Director of Development, AACJC, took part in the telephone survey. They were asked to list the five most serious issues facing vocational education in the 1980s. Prior to making the calls, I prepared a response to the same question.

When the telephone survey results, the Mehallis and Donovan articles, and my list are compared, there is a predictable commonality. What is, perhaps, significant about the outcome is the diversity of those responding. It suggests that the issues facing vocational education are becoming sufficiently visible that an agenda for action might be possible. A numerical weighting based on the priority assigned to the issue by the article authors or interviewees was used to produce a ranking. Five major issues emerged from the issues survey.

In order of importance they are: vocational education's response to the Job Training Partnership Act, updating of equipment in vocational laboratories and shops, service to adult students making mid-career changes, retraining of faculty so that they can respond to changing technology, and the development of basic skills among all vocational students. None of these issues are particularly new; however, vocational education's response will characterize the nature of our craft for the remainder of the 1980s. It is relevant to examine each issue and delimit its parameters.

The Issues: Parameters and Perceptions

The Job Training Partnership Act (JTPA) was passed in 1982. It is designed as a response to twin problems: the continued dislocation of the American economy and the failure of the Comprehensive Employment and Training Act (CETA) to rectify the problems of structural unemployment. Under JTPA a new public/private partnership is envisioned that will plan and implement job training programs as well as deliver other job-related services. The Act is designed to be a catalyst for developing greater cooperation and coordination in meeting local training needs. Only a concerted effort by education, business, industry, labor, and government will make the JTPA goal a reality. The problems of regional employment idiosyncracies, lack of trust and cooperation in training, and bureaucratic red tape are serious challenges facing JTPA.

Miller and Haenni report that the time lag between technological innovation and commercial application used to be 10 to 15 years. Now, it is three to four years.[5] Educational laboratories and shops must reflect or, at least, simulate the work place. Since most educational institutions are operating as

though technology transfer still took a decade, many labs and shops are obsolete. Concurrently, most federal and state sources of funds for equipment upgrading are diminishing. It is important that new linkages with business, industry, and government be forged so that upgrading as a byproduct of training becomes possible.

A variety of studies suggests that technological retraining is a prospect facing all American workers at least four times during their working life. Currently nearly four million workers are structurally unemployed. The challenge inherent in these statistics is multifaceted. We must be prepared to provide remedial, entry-level, upgrade, and structural retraining opportunities simultaneously. The problems of cost, location, accommodation, and motivation all affect our ability to respond. Gene Bottoms, AVA Executive Director, summarizes the nature of this issue. "Attention given to students when they enter an institution helps them make a 'reasoned choice' based on their abilities, interests, past educational performance and the opportunities that are likely to be available to them when they complete a given program."[6]

Workers are plagued directly by technological obsolescence and unemployment; faculty are not immune. In a 1982 national survey, Hamilton, et.al., discovered that the average length of time that vocational teachers had been away from the business or industry of their expertise was seven years.[7] In an age when technology is changing every three to four years, an obsolete faculty is the likely result if strategies are not implemented to provide professional development opportunities. Measures need to be taken to enable instructors to periodically return to the business or industry of their expertise. Also, professional devleopment programs must be designed which will allow faculty to achieve the competencies current in the work place. The

problems of cost, location, and motivation are equally applicable to teacher upgrading and worker retraining. Problems of this nature are best engaged by a variety of experimental projects that are industry, school, or technology specific. This strategy allows for maximum flexibility, adaptation, and transfer.

A technologically sophisticated economy requires employees who possess the basic skills necessary to master the new technologies. Vocational educators must be prepared to assist students in developing the competencies in reading, writing, mathematics, and computer applications that undergird the new technologies. At a time when the need for basic skills has never been higher, national test scores continue to fall. The President's National Commission on Excellence in Education in its report, A Nation At Risk, states, "The people of the United States need to know that individuals in our society who do not possess the levels of skill, literacy, and training essential to this new era will be effectively disenfranchised..."[8] The task of the 1980s will be to implement strategies which improve motivation, then deliver the competencies required for technological literacy. Failure courts the risk identified in the President's Commission. Now that the parameters of the issues facing vocational education have been delimited, what must be done? Is an agenda possible?

Synthesis: An Agenda for the 1980s

Shirley Gordon, president of Highline Community College, Washington, was a member of the President's Commission on excellence in Education. She presents a succinct statement of the challenge. "Because there is more to know, learning how to learn and how to continue learning are abilities we cannot

afford to be without. Today's world requires more understanding of the whys, not just the how to's. Specific occupational and operational skills will change; the basics will not."[9] The first step toward synthesis, therefore, is the development of a delivery system for fostering independent, self-motivated learning. The system will build a foundation upon which technological literacy can be constructed.

Miller and Haenni, in their review of the relationship between technological development and education, articulate the second step. "Applications of available technology is not an end in itself. An integral part of development is the adoption and expansion of technology directed toward specific needs. Technological diffusion is primarily an educational process."[10] A competent vocational faculty will be instrumental in preparing the social environment for technology transfer and application.

The final step toward synthesis is the move away from unbridled competition and toward greater cooperation and coordination. This is not a rejection of America's entrepreneural spirit. Peters and Waterman describe the process as "Simultaneous Loose-Tight Properties." It is, in essence, "the co-existence of firm central direction and maximum individual autonomy."[11] Autonomy is a product of discipline. Key shared values provide the framework for innovation. Whether in the classroom or work place, vocational education can direct the process of synthesis.

Does this agenda permit vocational education to engage the issues of the 1980s? Again, Lewis Carroll provides insight. Alice asks the Cheshire Cat what direction should she take. The cat responds, "That depends a good deal on where you want to get to."[12] If vocational educators seek to assist America in making the transition to the information society of the 21st century, then the synthesis agenda will point the way.

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11. Peters and Waterman. op.cit., p. 318.

12. Lewis Carroll. op.cit., p. 88.